Z68 Extreme4 Gen3

Intel® Z68 Chipset

ASRock
www.asrock.com

Product Brief

- Premium Gold Caps (2.5 x longer life time), 100% Japan-made high-quality Conductive Polymer Capacitors
- Digi Power, Advanced V8 + 4 Power Phase Design
- 2 x PCIe 3.0 x16 Slots, 1 x PCIe 2.0 x16 Slot, Supports AMD 3-Way CrossFireX™ and NVIDIA® Quad SLI™
- Supports Intel® HD Graphics Built-in Visuals
- Dr. Debug, Smart Swith Design: Power/Reset/Clear CMOS Switch with LED
- Support Intel Smart Response, Lucid Virtu Switchable Graphics
- Supports ASRock XFast USB, XFast LAN Technologies
- Supports ASRock On/Off Play, graphical UEFI, ASRock Extreme Tuning Utility (AXTU)
- Combo Cooler Option (C.C.O.)
- 7.1 CH HD Audio with Content Protection (Realtek ALC892 Audio Codec), Supports THX TruStudio™
- Free Bundle : 1 x Front USB 3.0 Panel, 1 x 3.5mm Audio Cable, CyberLink MediaEspresso 6.5 Trial, ASRock MAGIX Multimedia Suite

The specification is subject to change without notice. The brand and product names are trademarks of their respective companies. Any configuration other than original product specification is not guaranteed.

Detail Specification

Platform	- ATX Form Factor: 12.0-in x 9.6-in, 30.5 cm x 24.4 cm - All Solid Capacitor design (100% Japan-made high-quality Conductive Polymer Capacitors)
CPU	- Supports 2nd Generation Intel® Core™ i7 / i5 / i3 in LGA1155 Package - Advanced V8 + 4 Power Phase Design - Supports Intel® Turbo Boost 2.0 Technology - Supports Intel® K-Series unlocked CPU - Supports Hyper-Threading Technology
Chipset	- Intel® Z68
Memory	- Dual Channel DDR3 memory technology - 4 x DDR3 DIMM slots - Supports DDR3 2133(OC)/1866(OC)/1600/1333/1066 non-ECC, un-buffered memory - Max. capacity of system memory: 32GB - Supports Intel® Extreme Memory Profile (XMP)
Expansion Slot	- 2 x PCI Express 3.0 x16 slots (PCIE2/PCIE4: single at x16 or dual at x8/x8 mode) (PCI Express 3.0 with Intel® Ivy Bridge CPU, PCI Express 2.0 with Intel® Sandy Bridge CPU) - 1 x PCI Express 2.0 x16 slot (PCIE5: x4 mode) - 2 x PCI Express 2.0 x1 slots - 2 x PCI slots - Supports AMD Quad CrossFireX™, 3-Way CrossFireX™ and CrossFireX™ - Supports NVIDIA® Quad SLI™ and SLI™
Graphics	- Supports Intel® HD Graphics Built-in Visuals : Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® HD Graphics 2000/3000, Intel® Advanced Vector Extensions (AVX) - Pixel Shader 4.1, DirectX 11 with Intel® Ivy Bridge CPU, DirectX 10.1 with Intel® Sandy Bridge CPU - Max. shared memory 1759MB - Four VGA Output options: D-Sub, DVI-D, HDMI and DisplayPort - Supports HDMI 1.4a Technology with max. resolution up to 1920x1200 @ 60Hz - Supports DVI with max. resolution up to 1920x1200 @ 60Hz - Supports D-Sub with max. resolution up to 2048x1536 @ 75Hz - Supports DisplayPort with max. resolution up to 2560x1600 @ 60Hz - Supports Auto Lip Sync, Deep Color (12bpc), xvYCC and HBR (High Bit Rate Audio) with HDMI (Compliant HDMI monitor is required) - Supports HDCP function with DVI, HDMI and DisplayPort ports - Supports Full HD 1080p Blu-ray (BD) / HD-DVD playback with DVI, HDMI and DisplayPort ports
Audio	- 7.1 CH HD Audio with Content Protection (Realtek ALC892 Audio Codec) - Premium Blu-ray audio support - Supports THX TruStudio™
LAN	- PCIE x1 Gigabit LAN 10/100/1000 Mb/s - Broadcom BCM57781 - Supports Wake-On-LAN - Supports Energy Efficient Ethernet 802.3az - Supports PXE
Rear Panel I/O	I/O Panel - 1 x PS/2 Keyboard Port - 1 x D-Sub Port - 1 x DVI-D Port - 1 x HDMI Port - 1 x DisplayPort - 1 x Optical SPDIF Out Port - 4 x Ready-to-Use USB 2.0 Ports - 1 x eSATA3 Connector - 2 x Ready-to-Use USB 3.0 Ports - 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) - 1 x IEEE 1394 Port - 1 x Clear CMOS Switch with LED - HD Audio Jack: Rear Speaker / Central / Bass / Line in / Front Speaker / Microphone
SATA3	- 2 x SATA3 6.0 Gb/s connectors, support RAID (RAID 0, RAID 1, RAID 10, RAID 5, Intel Rapid Storage and Intel Smart Response Technology), NCQ, AHCI and "Hot Plug" functions - 2 x SATA3 6.0 Gb/s connectors by Marvell SE9120, support NCQ, AHCI and "Hot Plug" functions (SATA3_M2 connector is shared with eSATA3 port)
USB 3.0	- 2 x Rear USB 3.0 ports by Etron EJ168A, support USB 1.0/2.0/3.0 up to 5Gb/s - 1 x Front USB 3.0 header (supports 2 USB 3.0 ports) by Etron EJ168A, supports USB 1.0/2.0/3.0 up to 5Gb/s
Connector	- 4 x SATA2 3.0 Gb/s connectors, support RAID (RAID 0, RAID 1, RAID 10, RAID 5, Intel Rapid Storage and Intel Smart Response Technology), NCQ, AHCI and Hot Plug functions - 4 x SATA3 6.0 Gb/s connectors - 1 x Floppy connector - 1 x IR header - 1 x CIR header - 1 x COM port header - 1 x HDMI_SPDIF header - 1 x IEEE 1394 header - 1 x Power LED header - CPU/Chassis/Power FAN connector - 24 pin ATX power connector - 8 pin 12V power connector - SLI/XFire power connector - Front panel audio connector - 3 x USB 2.0 headers (support 6 USB 2.0 ports) - 1 x USB 3.0 header (supports 2 USB 3.0 ports) - 1 x Dr. Debug with LED
Smart Switch	- 1 x Power Switch with LED - 1 x Reset Switch with LED - 1 x Clear CMOS Switch with LED
BIOS Feature	- 64Mb AMI UEFI Legal BIOS with GUI support - Supports "Plug and Play" - ACPI 1.1 Compliance Wake Up Events - Supports jumperfree - SMBIOS 2.3.1 Support - CPU Core, IGPU, DRAM, PCH, CPU PLL, VTT, VCCSA Voltage Multi-adjustment
Support CD	- Drivers, Utilities, AntiVirus Software (Trial Version), CyberLink MediaEspresso 6.5 Trial, ASRock Software Suite (CyberLink DVD Suite - OEM and Trial; ASRock MAGIX Multimedia Suite - OEM)

Unique Feature	- ASRock Extreme Tuning Utility (AXTU)
	- ASRock Instant Boot
	- ASRock Instant Flash
	- ASRock APP Charger
	- ASRock SmartView
	- ASRock XFast USB
	- ASRock XFast LAN
	- Lucid Virtu
	- ASRock On/Off Play Technology
	- Hybrid Booster:
	  - CPU Frequency Stepless Control
	  - ASRock U-COP
	  - Boot Failure Guard (B.F.G.)
	- Combo Cooler Option (C.C.O.)
	- Good Night LED

Hardware Monitor	- CPU Temperature Sensing - Chassis Temperature Sensing - CPU/Chassis/Power Fan Tachometer - CPU/Chassis Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) - CPU/Chassis Fan Multi-Speed Control - Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore
OS	- Microsoft® Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit / XP / XP 64-bit compliant
Certifications	- FCC, CE, WHQL - ErP/EuP Ready (ErP/EuP ready power supply is required)
Accessories	- 1 x ASRock SLI_Bridge_2S Card - Quick Installation Guide, Support CD, I/O Shield - Floppy Cable - 4 x SATA Data Cables (Optional) - 2 x SATA 1 to 1 Power Cables (Optional) - 1 x 3.5mm Audio Cable (Optional) - 1 x Front USB 3.0 Panel - 4 x HDD Screws - 6 x Chassis Screws - 1 x Rear USB 3.0 Bracket

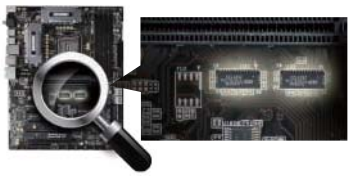
Z68 Extreme4 Gen3

Intel® Z68 Chipset

ASRock
www.asrock.com

Next-Gen PCIe 3.0 Support

By adapting PCI-E 3.0 quick switch IC onboard, the ASRock motherboards can support the Next-Gen PCI-E 3.0 PCI Express 3.0 can maximize the bandwidth for the next-gen PCI Express 3.0 VGA cards, provide ultimate graphics performance.

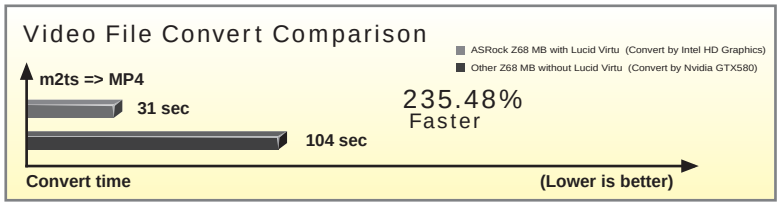


PCI-E architecture	Raw bit rate	Total bandwidth for x16 link
PCI-E 1.0	2.5GT/s	8GB/s
PCI-E 2.0	5.0GT/s	16GB/s
PCI-E 3.0	8.0GT/s	32GB/s

*Total bandwidth represents the aggregate interconnect bandwidth in both directions

Lucid Virtu™

With Lucid Virtu software, next-generation PCs with 2nd Generation Intel® Core processor platforms will dynamically assign tasks in real time to the best available graphics resource based on power, performance and features.



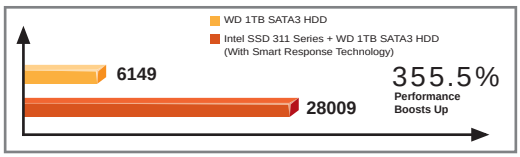
Test Platform :

MB : ASRock Z68 Motherboard
Other Z68 Motherboard
CPU : Intel Core i7 2600K 3.4GHz
DRAM : Kingston DDR3-1333 2Gx2
HDD : WD 500GB
VGA : Nvidia GTX580 ; Intel HD Graphics
OS : Windows 7 64bit SP1
Lucid : Lucid VIRTU 1.0.105
Nvidia Driver : 266.58
Application : Cyberlink MediaEspresso 6.5
Original File : m2ts, 1080p, 2200MB

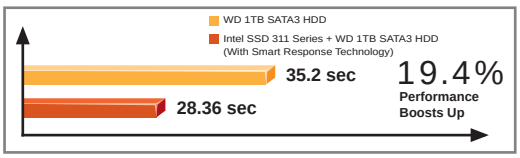
Intel Smart Response Technology

For users who are tempted to connect the SSD and HDD on ASRock Z68 Extreme4 Gen3 Motherboard, the Intel Smart Response Technology can make the SSD become the "Cache of the HDD" to boost up the HDD access speed.

PCMark 05 HDD Score



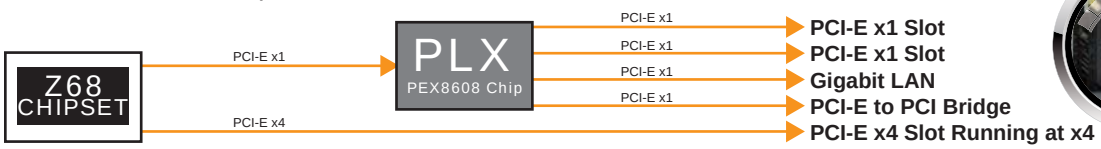
Boot time



System Configuration:

MB : Z68 Extreme4 Gen3
BIOS : L0.33
CPU : i7-2600K 3.4G
DRAM : Kingston DDR3-1333 2Gx2
SSD : Intel SSD 311 Series
HDD : WD 1TB SATA3 HDD
OS : Windows 7 64bit SP1 on WD 1TB SATA3 HDD

PLX PEX8608 Chip Onboard



With PLX PEX8608 chip, it generates more PCI-E lanes for PCI-E devices, so that all PCI-E devices are able to work at the proper speed simultaneously!

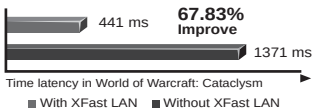
XFast LAN Technology

XFast LAN
Faster Internet Access

1 LAN Application Prioritization

You can configure your application priority ideally and/or add new programs.

2 Lower Latency In Game



After setting online game priority higher in XFast LAN, it can lower the latency in game.

3 Traffic Shaping

YouTube HD

You can watch Youtube HD video and download files simultaneously.

4 Real-Time Analysis Of Your Data

With the status window, you can easily recognize which data streams you are currently transferring.

Z68 Extreme4 Gen3

Intel® Z68 Chipset

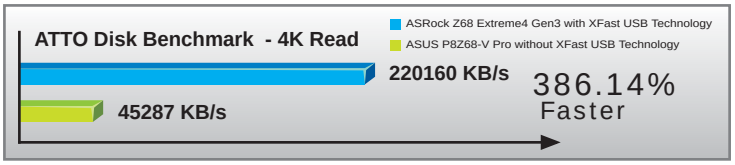
ASRock
www.asrock.com

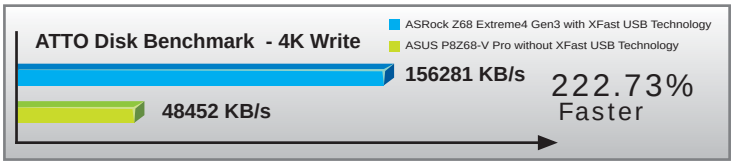
XFast USB Technology

The world s fastest USB transfer speed.

XFast USB
Boosts up your USB speed

USB 3.0 Benchmark





On/Off Play

Enjoy great audio experience from the portable audio devices via PC speaker even when the system is powered off.

Free Bundle
3.5mm Audio Cable

Intel® HD Graphics Built-in Visuals

Intel® Quick Sync Video
Intel® InTru™ 3D
Intel® Clear Video HD Technology
Intel® HD Graphics 2000/3000
Intel® Advanced Vector Extensions (AVX)

Digi Power

By adopting digital Pulse-width modulation (PWM), the ASRock Motherboard Series can provide CPU Vcore voltage more efficiently and smoothly.

Premium Gold Caps

Premium Gold Caps are 100% Japan-made solid capacitors are sleek, high gloss caps with a premium gold coating representing long life and stable performance.

Multi-VGA Output Options

D-Sub / DVI-D / Display / HDMI

THX TruStudio

Delivering the fullest audio experience for games, music and movies.

Graphical UEFI

Graphical Visual Experience
Mouse Enabling
Supports 3TB bootable HDD

AXTU

ASRock Extreme Tuning Utility (AXTU) is an all-in-one software to fine-tune different features in an userfriendly interface, which includes Hardware Monitor, Fan Control, Overclocking, OC DNA and IES.

MAGIX Multimedia Suite

The ultimate solutions to enhance your media experience. From music management, music creation, video editing to photo management. Simply do more with your media than you ever thought possible.

Cyberlink MediaEspresso 6.5 Trial

The fastest video media conversation software